

REMARKS

Claims 1-4, 6-9 and 12-16 have been examined, of which claims 1 and 15 are independent. Claims 1 and 4 have been amended herein. No new matter is added by any amendment made herein.

Objections

Claim 4 was objected to for a lack of antecedent basis for the phrase “aspiration port.” Claim 4 has been amended accordingly to overcome this objection. Removal of the objection is requested.

Rejections

Claims 1-4, 6-9, and 12-16 have been rejected under 35 USC 102(b) as being anticipated by US Pat. No. 5,419,764 to Roll (“Roll”).

Roll discloses a *lockable drainage catheter*, i.e., a catheter 101 used to drain a fluid from a patient. The catheter includes a flexible tube 102 that is preformed for retaining a distal end of the catheter in a patient. The distal end is straightened with a stiffening cannula for insertion into the patient. When the stiffening cannula is removed a thin cable or thread 103 within a passageway of the catheter is tightened to draw the end of the flexible tube into a bent retention position. The cable 103 is then locked using a twisting device. “Side holes” 117 formed in the concave portion of the flexible tube 102 of the catheter 101 enable the drainage of fluid from the patient via the catheter 101.

Claim 1

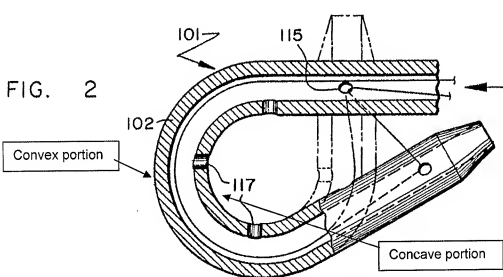
Claim 1 reads as follows:

1. A catheter for insertion into a biological conduit comprising:
 - an elongate catheter shaft having a proximal end and a distal end, the catheter comprising:
 - a material collection chamber located within the catheter shaft,
 - a controllably arcuate segment configured to selectively transition between a relatively straight shape and a bowed shape, the controllably arcuate segment defining an

opening in the form of a hole that is located at a convex portion of the controllably arcuate segment when the arcuate segment takes the bowed shape, wherein a portion of the controllably arcuate segment having the opening is configured to maintain a substantially constant cross section throughout the transition; and

a sliding member movably disposed within the shaft and configured to selectively traverse the opening to move an occlusive material received through the opening into the material collection chamber and away from said opening.

The Office Action states that Roll teaches “the controllably arcuate segment defining an opening (117) in the form of a hole that is located at a convex portion of the controllably arcuate segment ...” (Office Action, p. 3, lines 2-3) However, as shown in Roll’s FIG. 2, its holes 117 are formed in a concave portion of its flexible tube – not a convex portion as in claim 1:



Additionally, it would not be appropriate for Roll to position its holes 117 on the convex portion of the flexible tube 102 because the singular purpose of Roll’s catheter is to drain a fluid. Placing the holes 117 on the convex portion of flexible tube 102 would cause the holes to be blocked if the catheter were pressed up against a surface when internal to the patient. That blockage of holes 117 would frustrate the purpose of catheter

101 because it would inhibit, or at least substantially limit, the flow of fluid into catheter 101 and out of the patient.

Claim 1 has been amended to clarify that the catheter is structured for occlusive material removal (e.g., removal of thrombi, plaque, etc.), not fluid drainage as in Roll. Support for such an amendment is found throughout the application, where an occlusive material removal catheter is repeatedly described, e.g., used for unblocking clogged arteries. (See, e.g., Application, paragraphs. 01, 51, 53, and 59) In contrast to Roll, the device of claim 1 is intended to have its opening blocked by pressing the opening up against a surface so the occlusive material (not a fluid) can be drawn into the catheter and then cut by the “sliding member” of claim 1. Conversely, pressing Roll’s holes 117 against a surface would not allow Roll’s catheter to drain fluid as it is intended. Therefore, with respect to the placement of the opening, what is required in claim 1 is counterproductive in Roll, and vice versa.

Additionally, the sliding member of claim 1 is not taught by the “stiffening cannula” of Roll, which is not shown in Roll at all. The description of the stiffening cannula in Roll is merely for maintaining the catheter in a straightened position for insertion into the patient. Since an occlusive material is not drawn into the catheter of Roll, the stiffening cannula, even if it does pass by Roll’s holes 117, is not taught as being “configured to selectively traverse the opening to move an occlusive material received through the opening into the material collection chamber and away from said opening,” as is the sliding member of claim 1. Instead, Roll’s stiffening cannula has no apparent utility in draining Roll’s fluid, let alone removing an occlusive material.

For various reasons, Roll does not anticipate the device of claim 1. Reconsideration and removal of the reject is requested.

Claims 2-4, 6-9, and 12-14

Claims 2-4, 6-9 and 12-14 each directly or indirectly depend from claim 1, and as such are also not anticipated by Roll.

With respect to claim 2, since Roll does not teach drawing an occlusive material through the opening it does not teach the suction means of claim 2.

With respect to claim 3, since Roll does not teach a material collection chamber, but rather a fluid drainage path, it does not teach the aspiration chamber of claim 3.

With respect to claim 4, Roll is silent with respect to a “one-way valve located between the aspiration chamber and the material collection chamber, said valve oriented to allow material to flow from the material collection chamber to an aspiration port extending from the aspiration chamber.”

With respect to claim 6, Roll, which does not teach a material collection chamber, is silent with respect to placement of the material collection chamber “proximal to the controllably arcuate segment.”

With respect to claim 7, Roll, which does not teach removal of an occlusive material, is silent with respect to “a material extraction lumen between the distal end of the catheter shaft and an aspiration port located on the proximal portion of the device.”

With respect to claim 9, since Roll does not teach the sliding member of claim 1, it does not teach that the “positioning of the sliding member within the controllably arcuate segment causes said arcuate segment to be relatively straight,” as in claim 9.

With respect to claim 12, since Roll does not teach the sliding member of claim 1, which is used for removing an occlusive material, it does not teach “wherein the sliding member has a cutting edge on the end facing the opening in the controllably arcuate segment,” as in claim 12. Since Roll is only concerned with fluid drainage a sliding member with a cutting edge is not relevant to Roll’s catheter, and not explicitly or implicitly taught by Roll.

With respect to claim 13, since Roll does not teach the sliding member of claim 1, it does not teach “wherein the sliding member is attached to a flexible shaft, said shaft traversing the length of the catheter and said sliding member advanced and retracted by advancing and retracting said shaft from controls located on the proximal end of said catheter,” as in claim 13. Roll does not, for example, teach its straightening cannula as being attached to a flexible shaft nor does it teach such controls.

For various reasons, claims 2-4, 6-9 and 12-14 are not anticipated by Roll and reconsideration and removal of these rejections is requested.

Claims 15 and 16

Claim 15 is an independent claim that includes a catheter comprising a "controllable arcuate segment" similar to that of claim 1, which can take a bowed shape and has an opening/ hole formed on the convex portion of the arcuate segment. Claim 15 has been amended to clarify that "the hole is configured to receive and occlusive material when the arcuate segment takes the bowed shape."

Thus, for reasons put forth above with respect to claim 1, claim 15 is not anticipated by Roll. Reconsideration and removal of the rejection is requested.

Claim 16 depends from claim 15 and discloses a sliding member similar to that of claim 1. For reasons put forth above with respect to claim 1, claim 16 is not anticipated by Roll. Reconsideration and removal of the rejection is requested.

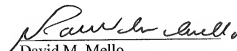
Closing Remarks

It is submitted that all claims are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

Authorization is hereby given to charge Deposit Account No. 501798 in the amount of \$60 to cover the one-month extension of time fee and any additional fees which may be due.

Respectfully submitted,

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